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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,390	08/15/2003	Tomas Sander	10637-005002	9485

26191 7590 04/05/2007
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EXAMINER

LUDWIG, PETER L

ART UNIT	PAPER NUMBER
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3621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/642,390	Applicant(s) SANDER ET AL.	
	Examiner Peter L. Ludwig	Art Unit 3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/02/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgements

1. This Office Action is in correspondence with the Preliminary Amendment filed on February 17, 2004, which cancelled claims 1-31 and added the new claims of 32-47. Therefore, the pending claims in this application are 32-47.
2. This Office Action is given Paper No. 20070328 for reference purposes only.
3. This application is a continuation of the abandoned application of 09/637,475, which claims benefit of 60/148,467.

Information Disclosure Statement

4. The information disclosure statement filed November 2, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

5. The drawings are objected due to the handwritten numbers used to label the various elements of the figures of 1 and 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims XXX are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 32, 44, are deemed as vague and indefinite regarding the use of the word "may." The USPTO interprets claim limitations that contain "*if, may, might, can, when and could*" statement(s), as optional language. As matter of linguistic precision, optional claim elements do not narrow claim limitations, since they can always be omitted (In re Johnston, 77 USPQ2d 1788 (CA FC 2006)). Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation.

b. Claim 43, is deemed indefinite by the Examiner due to the vagueness of receiving and sending. Examiner is unclear who is sending and receiving the public set of roots to the user. Is it the user who is sending and receiving from him/herself, or is it a second entity? Examiner needs clarification within the claim language.

c. Claim 41 recites the limitation "to one of the withdrawn coins" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 32-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Chaum et al. (Reference U on the attached PTO – 892; “Chaum”).

10. As per claim 32, Chaum clearly discloses a method of issuing an electronic coin, comprising:

- **receiving a plurality of values, each value being a function of a pre-image of an electronic coin** (pg. 325, 4. Blacklisting Withdrawals)
- **for each received value, populating a leaf of hash tree with a function of the received value** (pg. 325, 4. Blacklisting Withdrawals);
- **publicly distributing roots of a hash tree, wherein the roots of the hash tree may be used to verify the validity of the electronic coin to be issued and to audit a supply of electronic coins** (pg. 325, 4. Blacklisting Withdrawals; Examiner is interpreting that once the root is distributed to “Alice” it is public knowledge in the public domain, and therefore it was distributed to the public).

11. As per claim 33, Chaum clearly discloses the method of claim 32 as described above.

Chaum further teaches **wherein the pre-image of the electronic coin is a function of a serial number and a random number** (pg. 325, 4. Blacklisting Withdrawals; pg. 319, Introduction).

Art Unit: 3621

12. As per claim 34, Chaum clearly discloses the method of claim 32 as described above. Chaum further teaches the method **comprising verifying that the electronic coin is well formed** (pg. 320).

13. As per claim 35, Chaum clearly discloses the method of claim 32 as described above. Chaum further teaches the method **comprising issuing the electronic coin** (pg. 321, 5-6).

14. As per claim 36, Chaum clearly discloses the method of claim 35 as described above. Chaum further teaches the method **comprising crediting the account of a merchant in the amount of the issued electronic coin** (pg. 321, 5-6).

15. As per claim 37, Chaum clearly discloses the method of claim 35 as described above. , further comprising:

- **removing the leaf corresponding to the electronic coin** (pg. 320, 3);
- **updating the hash tree** (Updating lists is considered to be an inherent feature to any system that depends on the list for operation of a business/earning an income);
- **distributing the roots of the updated hash tree** (pg. 320, pg. 320, 3-5).

16. As per claim 38, Chaum clearly discloses the method of claim 37 as described above. Chaum further teaches **wherein distributing the roots of the hash tree comprises providing controlled access** (pg. 320).

17. As per claim 39, Chaum clearly discloses the method of claim 37 as described above. Chaum further teaches **wherein distributing the roots of the hash tree comprises making the roots accessible to the general public** (pg. 325, 4. Blacklisting Withdrawals; Examiner is interpreting that once the root is distributed to "Alice" it is public knowledge in the public domain, and therefore it was distributed to the public).

18. As per claim 40, Chaum further teaches a method of auditing a supply of electronic coins in an electronic monetary system, comprising:

- **accessing a hash tree that is a function of a plurality of leaves, each leaf being a function of a pre-image of an electronic coin that has not been withdrawn (pg. 319-320, 1-5);**
- **accessing withdrawal records corresponding to coins that have been withdrawn and accessing a public list of roots of the hash tree (pg. 325-326, 4. Blacklisting Withdrawals);**
- **verifying the validity of the supply of electronic coins in the electronic monetary system (pg. 325-326, 4. Blacklisting Withdrawals).**

19. As per claim 41, Chaum clearly disclose the method of claim 40 as described above. Chaum further teaches **wherein each of the withdrawal records corresponds uniquely to one of the withdrawal coins (pg. 325-326, 4. Blacklisting Withdrawals).**

20. As per claim 42, Chaum clearly discloses the method of claim 41 as described above. Chaum further teaches **wherein the validity of the supply of electronic coins is verified without knowledge of which withdrawal record corresponds to which withdrawn coin (pg. 321, see the second set of 1-5 (bottom of page)).**

21. As per claim 43, Chaum clearly discloses a method of redeeming an electronic coin, comprising:

- **receiving a public set of roots of a hash tree (pg. 323, 3. Untraceable Checks);**
- **receiving a pre-image value of the electronic coin from a customer (pg. 324);**
- **sending the public set of roots of the hash tree to the customer (pg. 324);**

- **receiving from the customer a zero knowledge proof that the roots of the hash tree are a function of the electronic coin** (pg. 320; “Our work is motivated by .. zero-knowledge. Our scheme protects Alice’s privacy unconditionally...”).

22. As per claim 44, Chaum clearly discloses the method of claim 43 as described above.

Chaum further teaches **wherein the customer may remain anonymous by not revealing the serial number of the electronic coin** (pg. 319, 1.).

23. As per claim 45, Chaum clearly discloses the method of claim 43 as described above.

Chaum further teaches the method **comprising periodically receiving an updated public set of roots of the hash tree** (pg. 324; Updating lists is considered to be an inherent feature to any system that depends on the list for operation of a business/earning an income).

24. As per claim 46, Chaum clearly discloses the method of claim 43 as described above.

Chaum further teaches the method **comprising transferring goods or services to the customer** (pg. 321, 6.).

25. As per claim 47, Chaum clearly discloses the method of claim 46 as described above.

Chaum further teaches the method **comprising sending a payment transcript to an issuer of the electronic coin** (pg. 322; The Examiner is interpreting the disclosure of “The bank can easily search its records to ensure that C has not been used before” as making it obvious to one of ordinary skill in the art that some sort of “payment transcript” was recorded in the memory of the issuer (bank)).

Examiner Note

26. Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may be applied as well. It is respectfully requested from the applicant, in preparing responses, to fully consider the reference in its entirety as potentially teaching all of part of the claimed invention as well as the context of the passage as taught by the prior art or disclosed by the examiner.

27. After careful review of the specification and prosecution history, the Examiner is unaware of any desire—either expressly or implicitly—by Applicants to be their own lexicographer and to define a claim term to have a meaning other than its ordinary and accustomed meaning. Therefore, the Examiner starts with the heavy presumption that all claim limitations are given their ordinary and accustomed meaning. See *Bell Atlantic Network Services Inc. v. Covad Communications Group Inc.*, 262 F.3d 1258, 1268, 59 USPQ2d 1865, 1870 (Fed. Cir. 2001) (“[T]here is a heavy presumption in favor of the ordinary meaning of claim language as understood by one of ordinary skill in the art.”); *CCS Fitness Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366, 62 USPQ2d 1658, 1662 (Fed. Cir. 2002) (There is a “heavy presumption that a claim term carries its ordinary and customary meaning.”). See also MPEP §2111.01 and *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).¹

¹ It is the Examiner’s position that “plain meaning” and “ordinary and accustomed meaning” are synonymous. See e.g. *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001) (“[A]ll terms in a patent claim are to be given their plain, ordinary and accustomed meaning . . .”).

In accordance with the ordinary and accustomed meaning presumption, during examination the claims are interpreted with their “broadest reasonable interpretation” *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). See MPEP §2111.

However, if Applicants disagree with the Examiner and have either (a) already used lexicography or (b) wish to use lexicography and therefore (under either (a) or (b)) desire a claim limitation to have a meaning other than its ordinary and accustomed meaning, the Examiner respectfully requests Applicants in their next response to expressly indicate² the claim limitation at issue and to show where in the specification or prosecution history the limitation is defined. Such definitions must be clearly stated in the specification or file history. *Bell Atlantic*, 262 F.3d at 1268, 59 USPQ2d at 1870, (“[I]n redefining the meaning of particular claim terms away from the ordinary meaning, the intrinsic evidence must ‘clearly set forth’ or ‘clearly redefine’ a claim term so as to put one reasonably skilled in the art on notice that the patentee intended to so redefine the claim term”).³ The Examiner cautions that no new matter is allowed.

² “Absent an *express intent* to impart a novel meaning, terms in a claim are to be given their ordinary and accustomed meaning. [Emphasis added.]” *Wenger Manufacturing Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1232, 57 USPQ2d 1679, 1684 (Fed. Cir. 2001) (citations and quotations omitted). “In the absence of an *express intent* to impart a novel meaning to claim terms, an inventor’s claim terms take on their ordinary meaning. We indulge a heavy presumption that a claim term carries its ordinary and customary meaning. [Emphasis added.]” *Teleflex Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1380 (Fed. Cir. 2002) (citations and quotations omitted).

³ See also *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1576 (Fed. Cir. 1996), (“[A] patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, *as long as* the special definition of the term is *clearly stated* in the patent specification or file history. [Emphasis added.]”); *Multi-form Desiccants Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998) (“Such special meaning, however, must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention.”).

Applicants are reminded that failure by Applicants in their next response to properly traverse this issue in accordance with 37 C.F.R. §1.111(b) or to be non-responsive to this issue entirely will be considered a desire by Applicants to forgo lexicography in this application and to continue having the claims interpreted with their broadest reasonable interpretation.⁴ Additionally, it is the Examiner's position that the above requirements are reasonable.⁵ Unless expressly noted otherwise by the Examiner, the preceding discussion on claim interpretation principles applies to all examined claims currently pending.

28. To the extent that the Examiner's interpretations are in dispute with Applicants' interpretations, the Examiner hereby adopts the following definitions—under the broadest reasonable interpretation standard—in all his claim interpretations.⁶ Moreover, while the following list is provided in accordance with *In re Morris*, the definitions are a guide to claim

See also MPEP §2111.01, subsection titled "Applicant May Be Own Lexicographer" and MPEP §2173.05(a) titled "New Terminology."

⁴ See 37 C.F.R. §1.104(c)(3) which states in part: "the examiner may rely upon admissions by applicant . . . as to *any matter* affecting patentability [Emphasis added.]"

⁵ The Examiner's requirements on this matter are reasonable on at least two separate and independent grounds. First, the Examiner's requirements are simply an express request for clarification of how Applicants intend their claims to be interpreted so that lexicography (or even an *attempt* at lexicography) by Applicants is not inadvertently overlooked by the Examiner. Second, the requirements are reasonable in view of the USPTO's goals of compact prosecution, productivity with particular emphasis on reductions in both pendency and cycle time, and other goals as outlined in the USPTO's The 21st Century Strategic Plan, February 3, 2003 available at www.uspto.gov/web/offices/com/strat21/index.htm (last accessed February 14, 2006).

⁶ While most definition(s) are cited because these terms are found in the claims, the Examiner may have provided additional definition(s) to help interpret words, phrases, or concepts found in the definitions themselves or in the prior art.

terminology since claim terms must be interpreted in context of the surrounding claim language.⁷

Finally, the following list is not intended to be exhaustive in any way:

29. **Data** “Plural of the Latin datum, meaning an item of information. In practice, data is often used for the singular as well as plural the form of the noun.” Computer Dictionary, 3rd Edition, Microsoft Press, Redmond, WA, 1997.

30. **Customer** “One that purchases a commodity or service” *Id.*

31. **Consumer** “: one that consumes: as a: one that utilizes economic goods” Merriam-Webster’s Collegiate Dictionary, 10th Edition, Merriam-Webster Inc., Springfield, M.A., 1997.
Consume “2 : to utilize economic goods.” *Id.*

32. **For** “1 a — used as a function word to indicate purpose <a grant ~ studying medicine>”

33. **Information** “ 2 a . . . (3): FACTS, DATA . . . ” Merriam-Webster’s Collegiate Dictionary, 10th Edition, Merriam-Webster Inc., Springfield, M.A., 1997.

34. **Associate**: “1: closely connected with one another . . . ” *Id.*

35. **Verify** “1. To determine whether a transcription of data or other operation has been accurately accomplished. 2. To check the results of keypunching.” Dictionary of Communications Technology: Terms, Definitions and Abbreviations, Wiley, 1998.

36. **Merchant** “A person engaged in buying and selling.” Roget’s II: The New Thesaurus, Third Edition, 1995.

⁷ See e.g. *Brookhill-Wilk 1 LLC v. Intuitive Surgical Inc.*, 334 F.3d 1294, 1300, 67 USPQ2d 1132, 1137 (Fed. Cir. 2003) (abstract dictionary definitions are not alone determinative; “resort must always be made to the surrounding text of the claims in question”).

Art Unit: 3621

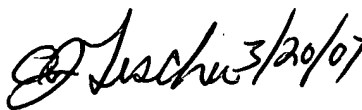
37. ***Controlled Access*** "The process of allowing access to certain network resources only to those with the correct authorization." Focal Dictionary of Telecommunications, Focal Press, 1999.

Conclusion

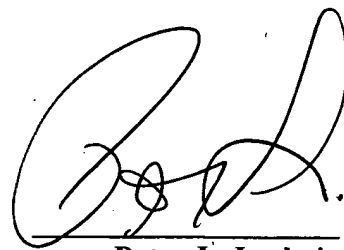
38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter L. Ludwig whose telephone number is 571-270-1365. The examiner can normally be reached on Mon-Fri 7:30-5:00, 1st Fri. Off, 2nd Fri. 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Fischer can be reached on 571-272-6779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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